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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,328	02/24/2004	Cesar A. Galindo-Legaria	MSFT-3515 (138320.02)	9709

41505 7590 02/23/2005
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EXAMINER

VEILLARD, JACQUES

ART UNIT PAPER NUMBER

2165

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/785,328	GALINDO-LEGARIA ET AL.	
	Examiner	Art Unit	
	Jacques Veillard	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18,19,21 and 23-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-36,38 and 40-43 is/are allowed.
- 6) ☒ Claim(s) 18,19, 23-32 and 39 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the applicant's amendment filed on 11/8/2004.
2. Claims 18, 29, 30, 33, 37 have been amended, claims 20, 22 have been canceled, and claims 39-43 have been added as new claims.
3. Claims 18, 19, 21, and 23-43 are pending and presented for examination.

Response to Arguments

4. Applicant's arguments with respect to claims 18, 19, 21 and 23-43 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

5. Claim 21 is objected to under 37 CFR 1.75(c), as being of improper dependent form because the claim depends on claim 20 which a cancel claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 18, 19, 23-32, and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 18 and 30, the claims recite the limitations “the rank data can facilitate” the verb “can” render the claim indefinite.

8. The dependent claims 19, 23-29, 31-32, and 39 being further limiting to the independent claims 18 and 30, definite and enabled by the specification are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 37 is rejected under 35 U.S.C. 102(b) as being anticipated by Graefe et al. (U. S. Pat. No. 5,822,747).

As per claim 37, Graefe et al. disclose a computer program product for use in conjunction with a computer system, wherein the computer program product comprising a computer readable storage medium and a computer program mechanism embedded therein that configures to perform a method (See Graefe et al. col. 43, lines 35-38). In particular, Graefe et al. disclose the claimed limitations of including “a directory for a data structure having a plurality of groups of alternative operators for carrying out a database query, at least some of the operators having pointers to one or more different ones of the groups” (See Graefe et al. Figs. 18A through 18D, and col. 16, lines 43-54), the directory including: indicia representing locations of the operators

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within the data structure (See Graefe et al. Figs. 13B, 16B, 16C and col.7, lines 41-65); rank data for each operator relating to alternative operators in other groups (See Graefe et al. Fig. 15U and col.21, line 59 through col.22, line 18); and a global rank based on the operator rank data for each alternative plan that uniquely identifies one respective plan from every other alternative plan (See Graefe et al. Figs 3B-3D in conjunction with elements 316, 318, 320, and 330, col.9, lines 37- 67).

Allowable Subject Matter

10. Claims 18, 19, 23-32 and 39 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

11. Claims 33-36, 38, and 40-43 are allowed over the prior art of record.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art taken singularly or in combination fail to teach or suggest a system comprising a ranking module for ranking the operators in groups and unranking the operators so as to construct a plurality of different execution plans for a query, wherein each execution plan is assigned a unique global rank, based on operator rank data, that identifies one respective execution plan from all other possible execution plans as recited in independent claim 33.

The dependent claims 34-36, and 38, being further limiting to the independent claim 33, definite and enabled by the specification are also allowed.

Regarding claim 40, the prior art taken singularly or in combination fail to teach or suggest a method for determining identification data for each execution plan based on the identification data for each operator, whereby the identification data for each execution plan uniquely identifies the respective execution plan from all other execution plans.

The dependent claims 41 and 42, being further limiting to the independent claim 40, definite and enabled by the specification are also allowed.

Regarding the instant independent claim 43, the prior art taken singularly or in combination fail to teach or suggest a method for generating a plan for executing a database query by assembling an execution tree for a selected execution plan by unranking the selected execution plan, wherein unranking the selected execution plan involves selecting one of the operators from each group associated with the identifier of the selected execution plan.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact In formations

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques Veillard whose telephone number is (571) 272-4086. The examiner can normally be reached on Mon. to Fri. from 9 Am to 4:30 PM, alt. Fri. off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272- 4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J.V.

Jacques Veillard
Patent Examiner TC 2100

C. Rones
CHARLES RONES
PRIMARY EXAMINER

February 17, 2005